



# Marshall Space Flight Center

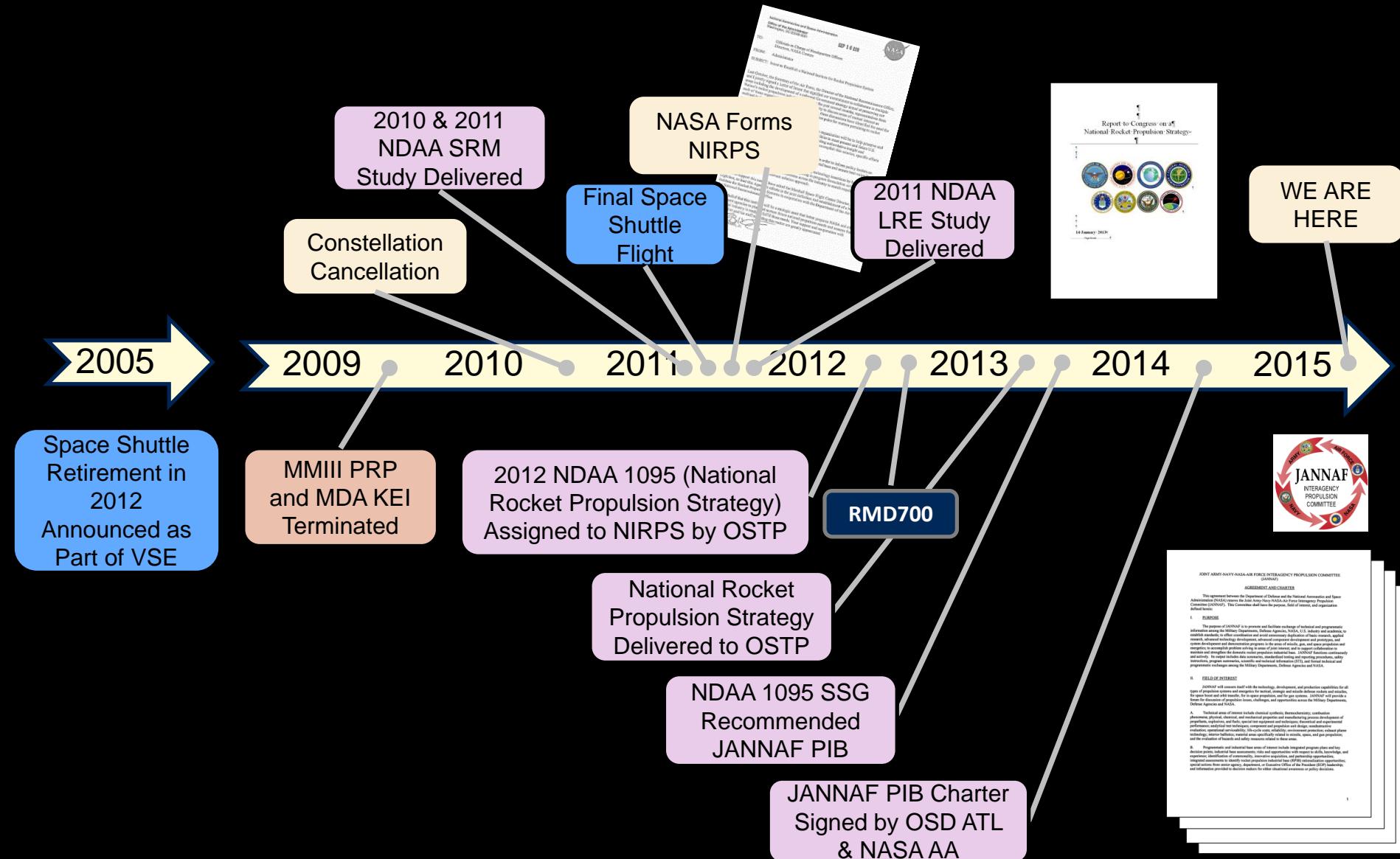
Introduction to JANNAF PIB

*June 2, 2015*

marshall



# Path to JANNAF PIB



# Grand Challenges Facing Rocket Propulsion



Lack of integrated space strategies across Government Agencies and Departments

Frequent program starts & cancellations

Shuttle retirement

Uncertainty in future needs

Industrial base decline

Overcapacity of production capability

Rising supplier costs

Large solid rocket motor industrial base decline

Lack of multi-Agency vision

Reduce development & sustainment costs

Foster access to facilities & expertise

Support industrial base competitiveness & resilience

Collaborate across Agencies

Implement an integrated Science & technology plan

Invigorate the STEM pipeline

Overall decline in aerospace engineer demand

Lack of predictable long-term funding

Lack of sustained technology development

Aging workforce

Lack of defined space missions

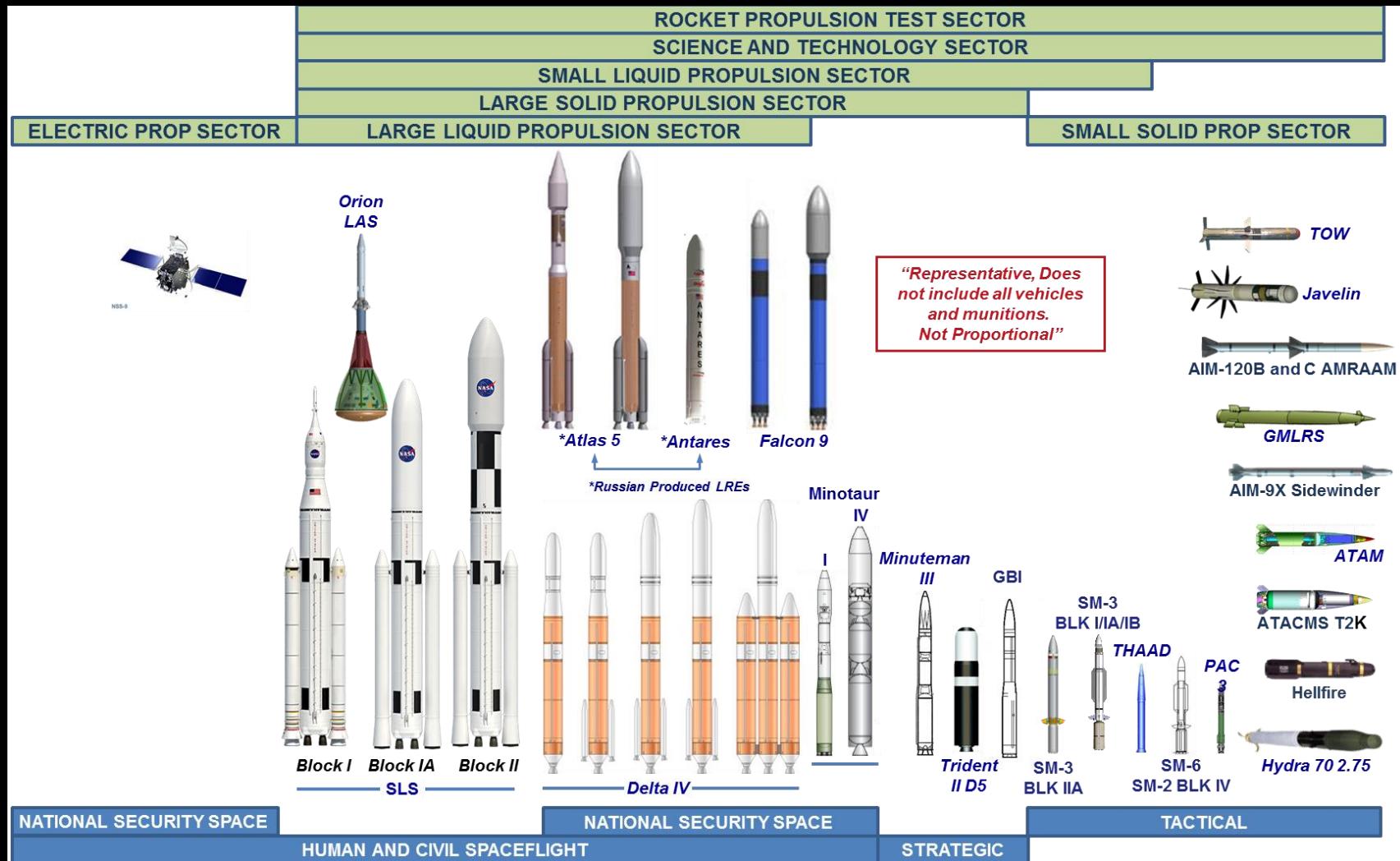
Fewer engineers have technology development experience

Difficulty in access to government facilities

Systems infrastructure, supply chain, & skill base challenges

**Loss of competitiveness in the global market**

# Highly Interconnected Rocket Propulsion Industrial Base Serving Government and Commercial Needs



*Changes in a program can have effects on seemingly unrelated programs.*

# Grand Challenges Still Challenge Us

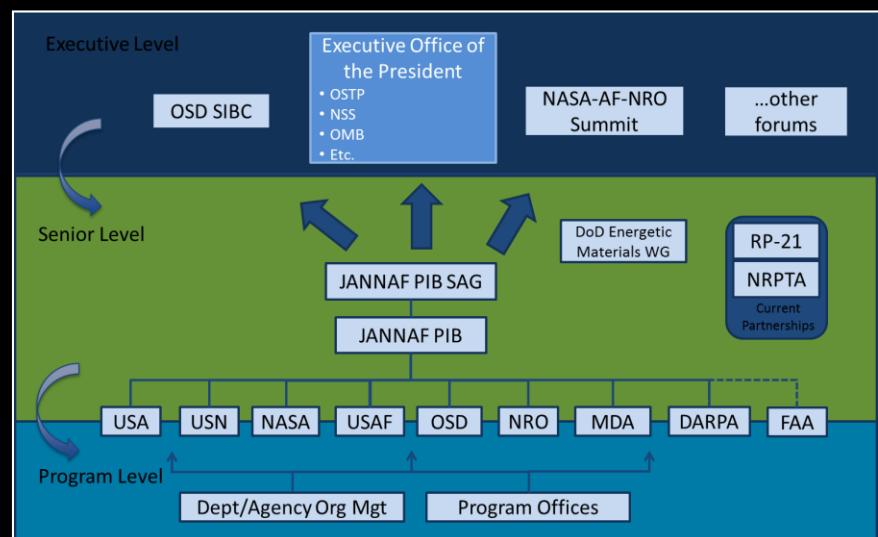
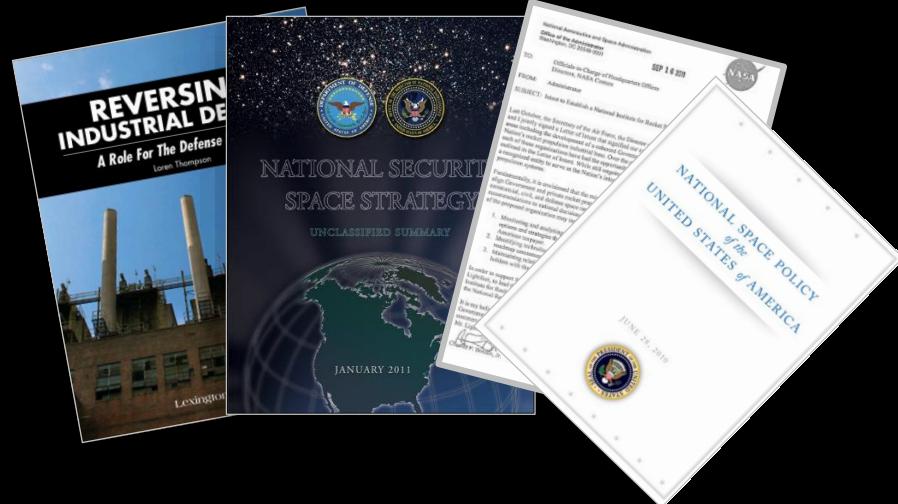


- Continued industry consolidation
- Even more interconnectedness between agencies, sectors and programs
- Limited USG rocket propulsion budgets
- Increasing need to lower costs while improving performance
- USG needs a way to understand the whole picture of the RPIB
- JANNAF is a trusted, integrated Government-wide forum
- Augmentation of JANNAF with a Programmatic and Industrial Base group allows leveraging of resources, synergy with technical activities

# JANNAF PIB is Executing Tasks of National Importance



- Congressional and Administration concern about Rocket Propulsion Industrial Base (RPIB)
  - Widespread recognition of the problem
  - Sustainment of the solid rocket motor and liquid rocket engine industrial base is a national challenge that spans multiple departments and agencies of the U.S. Government.
  - Integrated approach among U.S. Government agencies
- PIB Supports Interagency Communication and Collaboration
  - JANNAF PIB Senior Advisory Group (SAG) established
    - Co-Chaired by NASA & DOD DUSD MIBP
    - **Members from Army, Navy, Air Force, NRO, MDA, OSD, & NASA**
    - JANNAF NASA/DOD PIB Charter Signed: June 2014





# PIB is an Integral Part of JANNAF

- This is the first JANNAF general meeting with integrated PIB activities
- The PIB is creating products that directly affect policy and decisions made at the highest levels of the U.S. Government
  - Products and Activities:
    - Integrated (i.e., collated) program plans & key decision points
    - Industrial base assessments
    - Identification of commonality, innovative acquisition, and partnership opportunities
    - Special actions from senior agency, department, or EOP leadership
    - Provide decision makers information for situational awareness or decisions in a timely and efficient manner
  - Working Group Studies
    - Small Solid Rocket Motor Capabilities (2015 NDAA task)
    - Ammonium Perchlorate industrial base capabilities and alternatives
    - Domestic Boost Propulsion
    - Helium Stewardship Act of 2013 effects
  - PIB Session open to all attendees (get details [here](#))
    - Senior leader panel discussion
    - Paper presentations

*PIB Panel  
Session: 3T  
Room: Capital II  
Time: 1:30 pm  
Wednesday, 6/3/15*

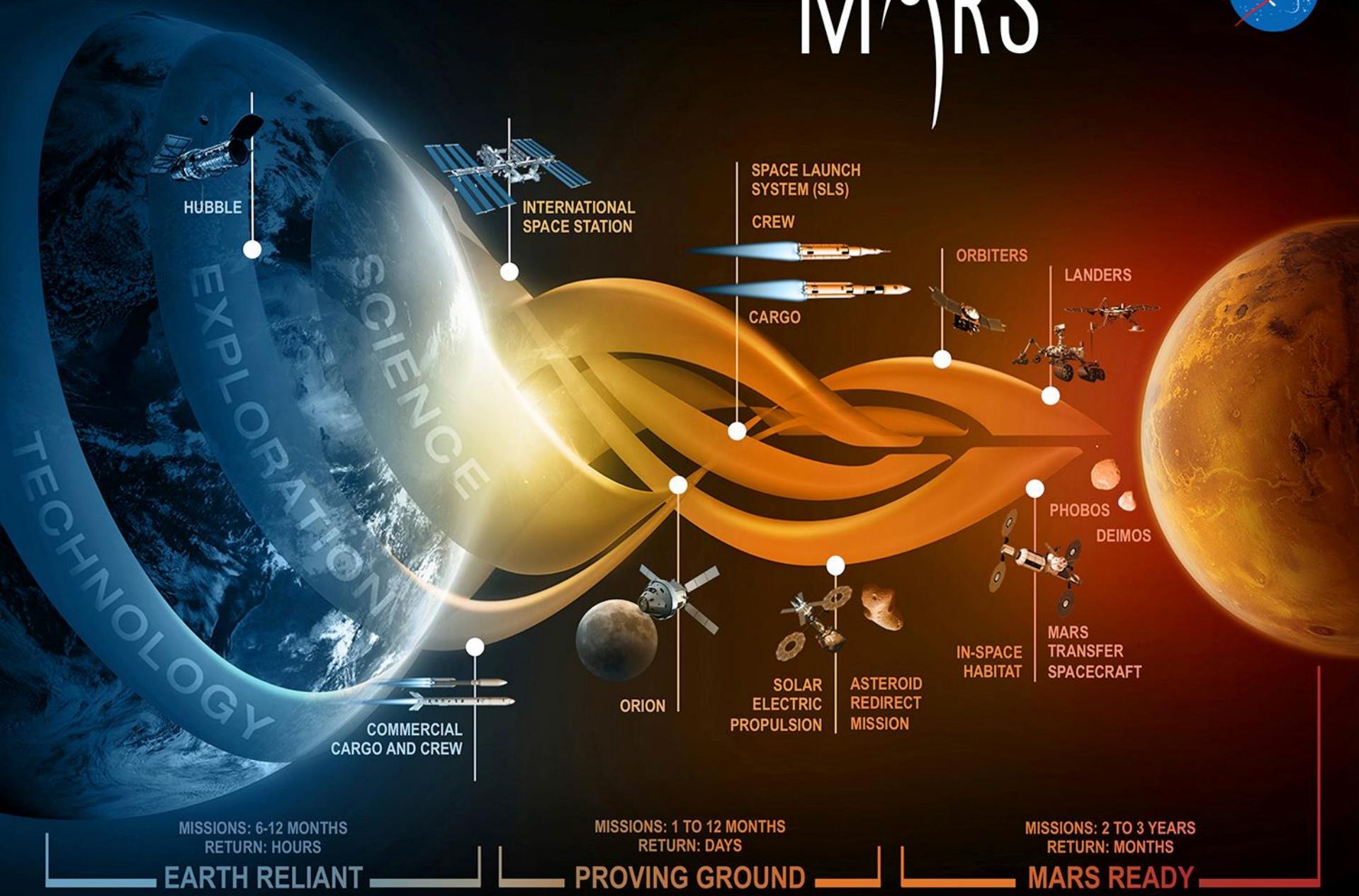
# JANNAF PIB Encompasses All of the Equity Holders in Rocket Propulsion for the US Government

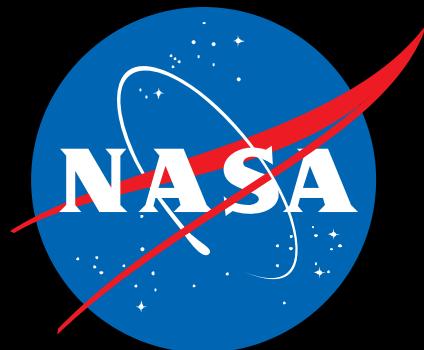


- Working Groups have key memberships from project, program, engineering, and R&D disciplines.
- The JANNAF Programmatic and Industrial Base (PIB) Executive committee integrates the working groups and has program, project, and engineering senior managers.
- The JANNAF PIB Senior Advisory Group consists of key senior executives and flag officers and sets the strategy for the JANNAF PIB.



# JOURNEY TO MARS





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# Backup Slides

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# Senior Advisory Group Membership

JANNAF Programmatic & Industrial Base Senior Advisory Group (SAG)				
Title	First Name	Last Name	Dept/Agency	Title
Dr.	L. Dale	Thomas (Co-Chair)	NASA	Associate Center Director, Technical, NASA/MSFC
Mr.	Andre'	Gudger (Co-Chair)	OSD	Deputy Assistant Secretary of Defense (Manufacturing & Industrial Base Policy) DASD (MIBP)
Dr.	Spiro G.	Lekoudis	OSD	AT&L/R&E/Research and Engineering
Mr.	Dyke	Weatherington	OSD	AT&L/SIO Deputy Assistant Secretary of Defense for Space and Intelligence
Mr.	Barry	Pike	USA	Deputy PEO, Missiles and Space
VADM	Terry	Benedict	USN	NAVY/Director Strategic Systems Programs
Dr.	Claire	Leon	USAF	Executive Director for Space Launch Enterprise
Dr.	Billy W.	Mullins	USAF	SAF/A-10 Assistant Chief of Staff, Strategic Deterrence & Nuclear Integration
			USAF	SAF/EA4S, Executive Agent for Space
Maj Gen	Scott	Jansson	USAF	AFPEO/SS Program Executive Officer for Strategic Systems
Mr.	William	Hill	NASA	NASA/HQ/CM Deputy Associate Administrator for Exploration Systems Development
Mr.	Benjamin	Neuman	NASA	NASA/HQ/CN Division Director for Human Spaceflight Capabilities
Mr.	Jim	Norman	NASA	NASA/HQ - Assistant Associate Administrator for Launch Services
Ms.	Karen	Borrows	USN	Executive Director/SEA 00VW Naval Ordnance Safety and Security Activity Indian Head, MD 20640
Ms.	Patricia	Gore	OSD/MDA	MDA/ECM Director, Industrial Manufacturing and Technology
Brig Gen Maj Gen	Anthony J. Steve	Cotton Denker (Summer 2015 process in)	NRO	Deputy Director, National Reconnaissance Office

# PIB Executive Committee Membership

JANNAF Programmatic & Industrial Base Executive Committee (PEC)				
Title	First Name	Last Name		Affiliation
Dr.	Rajiv	Doreswamy (Chair)	NASA	NASA/MSFC
Mr.	Robert	Read (Co-Chair)	OSD	OSD-ATL
Dr.	Kendall	Brown (Alt Chair)	NASA	NASA/MSFC
Dr.	Christine	Michienzi	OSD	OSD-ATL
Mr.	Stuart	Blashill	USN	NAVY/China Lake
Mr.	Shahab	Chaudhry	USN	NAVY/SSP
Mr.	Frank	Tse	USN	NAVY/NSWCIHD
Mr.	Andy	Culbertson	OSD	OSD/R&E
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	James	Fernandez	USAF	USAF/PEO/SP Space Launch Enterprise
Maj	Tim	Purcell	USAF	USAF/EA4S
Lt Col	Bill	Barrington	USAF	USAF/A10
Dr.	Jamie B.	Neidert	USA	ARMY/AMRDEC
Mr.	David	Tritt	USA	Army/PEO M&S
Mr.	John	Honeycutt	NASA	NASA/MSFC/SLS Program
Dr.	George	Schmidt	NASA	NASA/GRC
Mr.	Thomas	Williams	NASA	NASA/MSFC/Engineering
Lt Col	Mark	Cinnamon	NRO	NRO/OSL
Ms.	Megan	Meisner	MDA	Industrial Manufacturing and Technology

# PIB Working Group Membership

## JANNAF Programmatic & Industrial Base Large Liquid Propulsion Working Group

Title	First Name	Last Name	Affiliation
Dr.	Kendall	Brown (Lead)	NASA
Mr.	Drew	DeGeorge	USAF
Mr.	James	Fernandez	USAF
Maj	Lee	Kashka	USAF
Mr.	Bill	Jacobs	NASA
Mr.	George	Simone	NASA
Lt Col (s)	Tim	Purcell	USAF
Ms.	Dayna	Ise	NASA
Mr.	Robert	Read	OSD
Mr.	Kevin	Dickens	NASA
			NASA/GRC

## JANNAF Programmatic & Industrial Base Large Solid Rocket Motor Working Group

Title	First Name	Last Name	Affiliation
Mr.	Shahab	Chaudry (Lead)	USN
Mr.	David	Olsen	USN
Dr.	Carlos	Lopez	USN
Dr.	Christine	Michienzi	OSD
Mr.	Alex	Priskos	NASA
Mr.	Mark	Cooper	NASA
Lt Col	Bill	Barrington	NASA
Mr.	Drew	DeGeorge	USAF
Mr.	Kirk	Newman	OSD
Mr.	Robert	Read	OSD
			OSD-ATL

## JANNAF Programmatic & Industrial Base Small Liquid Propulsion Working Group

Title	First Name	Last Name	Affiliation
Mr.	Chuck	Pierce (Lead)	NASA
Mr.	James L.	Cannon	NASA
Mr.	James	Fernandez	USAF
Mr.	Drew	DeGeorge	USAF
Mr.	Robert	Read	OSD
Mr.	Dmitriy	Plaks	USA
Mr.	Kevin	Dickens	NASA
			NASA/GRC

## JANNAF Programmatic & Industrial Base Small Solid Rocket Motor Working Group

Title	First Name	Last Name	Affiliation
Mr.	Frank	Tse (Lead)	USN
Mr.	Al	Stern	USN
Mr.	Nolan	Walton	USN
Mr.	Stuart	Blashill	USN
Dr.	Christine	Michienzi	OSD
Mr.	David	Tritt	USA
Mr.	Kevin	Blacklock	USA
Dr.	Jamie B.	Neider	ARMY/AMRDEC
Mr.	Drew	DeGeorge	AF/AFRL/RQR
Mr.	Mark	Cooper	NASA/MSFC
Mr.	Steven	Harrison	NASA/MSFC
Mr.	Kirk	Newman	OSD
Mr.	Robert	Read	OSD
			OSD-ATL/MIBP

## JANNAF Programmatic & Industrial Base Science & Technology Working Group

Title	First Name	Last Name	Affiliation
Mr.	Drew	DeGeorge (Lead)	USAF
Mr.	James L.	Cannon	NASA
Mr.	Andy	Culbertson	OSD
Dr.	Christine	Michienzi	OSD
Mr.	Scott	Fuller	USN
Mr.	Mark D.	Klem	NASA
Mr.	Carlos	Lopez	USN
Ms.	Megan B.	Meisner	MDA
Dr.	Jamie B.	Neider	USAF
Mr.	Bob	Read	OSD
Mr.	David	Tritt	USAF
Mr.	Richard	Ryan	NASA
Mr.	Michael	Meyer	NASA
			NASA/GRC

## JANNAF Programmatic & Industrial Base Test & Evaluation Working Group

Title	First Name	Last Name	Affiliation
Mr.	Mark	Moody (Lead)	NASA
			NASA/SSC/RPT/TA00

## JANNAF Programmatic & Industrial Base Electric Propulsion Working Group

Title	First Name	Last Name	Affiliation
Mr.	David	Jacobson	NASA
			NASA/GRC